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(54) **SUB-MICRON SURFACE PLASMON
RESONANCE SENSOR SYSTEMS**

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See application file for complete search history.

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(57) **ABSTRACT**

Wearable or implantable devices combining microfluidic
control of sample and reagent flow and micro-cavity surface
plasmon resonance sensors functionalized with surface treat-
ments or coatings capable of specifically binding to target
analytes, ligands, or molecules in a bodily fluid are provided.
The devices can be used to determine the presence and con-
centration of target analytes in the bodily fluids and thereby
help diagnose, monitor or detect changes in disease condi-
tions.

39 Claims, 20 Drawing Sheets

